

Remarks/Arguments

Claims 1-17, 20, and 23-28 are pending in the application.

It is indicated in the Outstanding Office Action that claims 3, 5, 7, 11, 16, 17 and 20 would be allowable if rewritten in independent to include the features of the base claim and any intervening claims. This indication of allowable subject matter is noted with appreciation.

In the Final Office Action mailed July 20, 2006, claims 1, 2, 4, 8, 10, 12-15 and 23-28 were rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 4,143,820 (Bright, Sr.) In addition, claim 6 was rejected under 35 U.S.C 103(a) as being unpatentable over Bright, Sr. in view of U.S. Patent No. 5,111,995 (Dumitrascu et al.) and claims 9 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bright, Sr. in view of Dumitrascu et al. and further in view of U.S. Patent No. 4,226,368 (Hunter).

By this Response, the rejections under 35 U.S.C. 103 are traversed.

REJECTION OF CLAIMS 1, 2, 4, 8, 10, 12-15, AND 23-28

The Examiner rejected claims 1, 2, 4, 8, 10, 12-15 and 23-28 under 35 U.S.C 103(a) as being unpatentable over Bright, Sr.

RESPONSE

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Applicant submits that all of the features of the presently claimed invention are not disclosed, taught or suggested in the cited prior art, and that the cited prior art further teaches away from the presently claimed invention.

Independent claim 1 recites, in part, an extruded pipe comprising a drip-irrigation plug emitter having a flow restricting path, "said emitter *plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*" (Present application, Claim 1, emphasis added)

Independent claim 23 recites, in part, an extruded pipe adapted to be cut into pipe sections, each pipe section comprising a drip-irrigation plug emitter "*plugging the pipe section with respect to any fluid flow except for the flow through said flow restricting path...*" (Present application, Claim 23, emphasis added).

Independent claims 24 and 25 recite, in part, extruded pipes comprising a drip-irrigation plug emitter "*plugging the pipe with respect to any fluid flow except for the flow through said flow restricting path...*" (Present application, Claim 24, emphasis added).

Bright Sr. discloses a pressure regulating emitter 12 for a drip irrigation pipe. 10 externally mounted into an aperture in the wall of the pipe, so that its one portion is left outside the pipe and its other portion is located inside the pipe. The emitter is provided with a spring clip 18 to secure it to the outside of the pipe. When the emitter is mounted in the pipe, it occupies only a small fraction of the pipe's cross-section as seen in Fig. 1, allowing a water flow therethrough (marked with an arrow, and as follows from the explanations in col. 4, lines 4 to 6).

Bright Sr. fails to disclose, teach, or suggest an emitter "*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*" (Present Application, Claims 1, 23,

24, and 25)

In the Outstanding Office Action, the Examiner asserts that “[t]he plug emitter of Bright Sr. can be considered to plug the pipe with respect to any flow except for the flow through the flow restricting path *if the emitter plug is located on the end of the pipe*. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have placed emitters along the entire length of the pipe *and one at the very end of the pipe*.” (Outstanding Office Action, page 4, emphasis added).

This assertion is respectfully traversed.

In Bright, Sr., the emitters are *only* disclosed as being spaced along the length of the pipe (e.g. column 3, line 50). In addition, a relation between the diameter of the pipe and the body of the emitter is provided in various locations in the text in order to emphasize the small dimensions of the emitter which are advantageous for cost reduction (column 4, lines 4 to 8, and column 7, lines 5 to 10). According to this relation, for "one-half inch pipe, the body of the emitter 12 can be small, typically three-eighths inch in width." If indeed, according to the Examiner, one would try to locate the emitter of Bright, Sr. "*at the very end of the pipe*" (Outstanding Office Action) then the body of the emitter would have to fit the diameter of the pipe in order to attach to the pipe and seal the pipe. The aforementioned relation in Bright Sr. between the body of the emitter and the diameter pipe teaches away from practicing this option.

Accordingly, as Bright Sr. does not disclose, teach, or suggest an emitter "*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path*." (Present Application, Claims 1, 23, 24, and 25), and in fact teaches away from this feature, applicant submits that independent claims 1, 23, 24, 25, and claims 2, 4, 8, 10, 12 – 15, and 26 – 28 dependent

therefrom, are allowable over the prior art for at least this reason.

Further, a property of a sealing between the emitter of Bright Sr. and the pipe is disclosed as occurring when "the pipe 10 is urged outwardly by water pressure to form an effective seal against the lip 21" (column 4, lines 14 to 16). This sealing can only occur when the emitter is located at a position along the length of the pipe. However, in such a position, a portion of the pipe which is located below the lip may be urged outwardly by water pressure to press and seal against the lip. If the emitter of Bright Sr. would be placed "*at the very end of the pipe*" then no portion of the pipe could bear against the lip of the emitter in reaction to water pressure.

For this additional reason, Applicant submits that Bright Sr. teaches away from "*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*" (Present Application, Claims 1, 23, 24, 25) Applicant again submits that independent claims 1, 23, 24, 25, and claims 2, 4, 8, 10, 12 – 15, and 26 – 28 dependent therefrom, are allowable over the prior art.

Additionally, the emitter of Bright Sr. is disclosed as having a resilient strip disposed within an aperture (column 3, line 61) which may deflect in response to pressure (column 4, line 61) in order to adjust an effective aperture area to compensate for changes in pressure and thereby provide a controlled valve element (column 5, lines 49 to 54). When the emitter is inserted in the pipe, the aperture and resilient strip are oriented "aligned with their elongated axes parallel to the direction of flow" (column 5, lines 41 to 44). This orientation is disclosed in Bright Sr. as providing "a greater degree of freedom from dirt and particle clogging than structures heretofore known" because the valve elements are "exposed directly to the wiping action of the pipe flow, which is substantially parallel to their longitudinal axes" (column 6, lines 40 to 47). These citations taken from Bright Sr. obviously teach away from placing an emitter at the very end of the pipe as in such a placement the

elongated axes of the strip and aperture are positioned in an orientation perpendicular to the direction of flow.

For this additional reason, Applicant submits that Bright Sr. teaches away from “*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*” (Present Application, Claims 1, 23, 24, 25) Applicant again submits that independent claims 1, 23, 24, 25, and claims 2, 4, 8, 10, 12 – 15, and 26 – 28 dependent therefrom, are allowable over the prior art.

For all of the above reasons, applicant respectfully submits that Bright Sr. fails to teach each of the claimed features, and that the final rejection could arise only from hindsight. As such, the Examiner has failed to make a *prima facie* case of obviousness.

Claims 2, 4, 8, 10, 12-15, and 26 – 28 are believed to be patentable not only by virtue of their direct or indirect dependency on claim 1 but also for the totality of features recited therein.

REJECTION OF CLAIMS 6, 9, AND 11

In the Outstanding Office Action, the Examiner rejected claim 6 under 35 U.S.C 103(a) as being unpatentable over Bright, Sr. in view of Dumitrascu et al.; and, rejected claims 9 and 11 under 35 U.S.C. 103(a) as being unpatentable over Bright, Sr. in view of Dumitrascu et al. and further in view of Hunter.

RESPONSE

Claims 6, 9, and 11 depend directly or indirectly from Claim 1, which Applicant submits is in condition for allowance.

Applicant submits that Dumitrascu et al. and Hunter fail to cure the deficiencies of Bright, Sr.

Dumitrascu et al. is drawn to a drip irrigation tube formed from an elongated web, and comprising discrete emitter elements disposed at spaced intervals along the web. (Dumitrascu, Abstract).

Dumitrascu et al. fails to disclose, teach, or suggest an emitter “*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*” (Present Application, Claim 1)

Accordingly, Applicant submits that the combination of Bright Sr. and Dumitrascu fails to disclose, teach, or suggest all of the features of independent claim 1, and of claim 6 dependent therefrom, and thus that the Examiner has failed to make a *prima facie* case of obviousness.

Further still, Applicant submits that Hunter fails to cure the deficiencies of Bright Sr. and Dumitrascu. Hunter is drawn to a sprinkler head for use in a drip irrigation system, in which pressure dropping chambers comprise a plurality of series interconnected vortices disposed within stacked plates. (Hunter, Abstract)

Hunter fails to disclose, teach, or suggest an emitter “*plugging the pipe with respect to any fluid flow except for the flow through said flow-restricting path.*” (Present Application, Claim 1)

Accordingly, Applicant submits that the combination of Bright Sr., Dumitrascu, and Hunter fails to disclose, teach, or suggest all of the features of independent Claim 1, and of claims 9 and 11 dependent therefrom, and thus that the Examiner has failed to make a *prima facie* case of obviousness.

Claims 6, 9, and 11 are believed to be patentable not only by virtue of their direct or indirect dependency on claim 1 but also for the totality of features recited therein.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges with appreciation the Examiner's indication that claims 3, 5, 7, 11, 16, 17 and 20 would be allowable if rewritten in independent form.

All of the above claims depend directly or indirectly from claim 1, which applicant submits is now in condition for allowance. Accordingly, Applicant requests that the Examiner withdraw all objections to claims 3, 5, 7, 11, 16, 17, and 20.

CLAIM 23

Applicant respectfully traverses the Examiner's statement at page 4 of the Outstanding Office Action that "[c]laim 23 is a product-by-process claim," and submits that the Examiner has misinterpreted the claim. Applicant notes that it is clearly the *emitter* (a claimed feature) which is "plugging the pipe section with respect to any fluid flow except for the flow through said flow-restricting path, and forming a swelling at the outer surface of the pipe."

CONCLUSION

In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

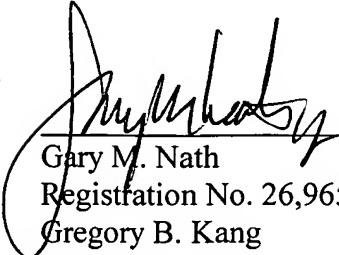
In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Appl. No. 10/644,086
Reply to Office Action of July 20, 2006
Attorney Docket No. 25646

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